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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,718	02/11/2004	Gil-Yong Park	5000-1-513	2825

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EXAMINER	
TAYONG, HELENE E	
ART UNIT	PAPER NUMBER
2611	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/776,718	PARK ET AL.	
	Examiner	Art Unit	
	HELENE TAYONG	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2008*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The request filled on 2/14/08 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 10776718 is acceptable and RCE has been established. An action on the RCE follows.

Response to Arguments

2. Applicants arguments regarding the rejection of claims 1-3 under 35 U.S.C § 102(b) as allegedly being anticipated by Masashi et al. (U.S. 5,574,714) and claims 4-6 stand rejected trader 35 U.S.C.§ I03(a) as allegedly being obvious over Masashi in view of Doh et al. (U.S. 6,9l 1,644 B2) have been considered but are moot in view of the new ground(s) of rejection because of amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being anticipated over Masashi et al. (5574714) in view of Orban (US 4208548).

(1) with regards to claim 1;

Masashi et al discloses in (figures 3 and 4) an automatic gain control (AGC) apparatus having a short settling time in a burst mode optical receiver, comprising:

a variable gain amplifier(10) for variably amplifying an input signal according to an AGC adjustment control signal (col. 2, lines 62-63);

an exponential amplifier (11 and16) for exponentially amplifying an output signal of the clipper (col.3,lines 22-31), and

a peak holder (13) for detecting a peak value from an output signal of the exponential amplifier(16) and for generating the AGC adjustment control signal for controlling a gain of the variable gain amplifier (col.3,lines 22-31).

Masashi et al. discloses all of the subject matter disclosed above, but for specifically teaching a clipper coupled to an output terminal of the variable gain amplifier for comparing an output signal of the variable gain amplifier with a preset signal V_{cut} and for outputting a signal difference only when the output signal of the variable gain amplifier is higher than or equal to the preset signal V_{cut} in amplitude , and wherein said clipper clips the output of the variable gain amplifier only when the output signal is lower than said present signal V_{cut}.

However, Orban in (fig.1, (4) and fig.8, (81)), teaches a clipper coupled to an output terminal of the variable gain amplifier (3) for comparing an output signal of the variable gain amplifier (col. 4, lines 2-8 and lines 23-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the clipper of Orban in the apparatus of Masashi et al for outputting a signal difference only when the output signal of the variable gain amplifier is

higher than or equal to the preset signal V_{cut} in amplitude, and wherein said clipper clips the output of the variable gain amplifier only when the output signal is lower than said present signal V_{cut}. The motivation to utilize Orban's device in the apparatus of Masashi et al was to improve on attack time to prevent clipping distortion (col.1, lines 45-55).

(2) with regards to claim 2;

Masashi et al further discloses a voltage controlled variable resistor (VCVR) coupled in parallel to the peak holder for creating a current leakage path and for preventing over current from flowing in the peak holder when the output signal of the exponential amplifier (16) is larger than or equal to a preset threshold (col.3, lines 49-58).

(3) with regards to claim 3;

Masashi et al further discloses a peak value detector (12) for converting a DC (Direct Current) level of an output signal of the exponential amplifier so that the DC level of the output signal of the exponential amplifier (16) is matched to a DC level of the peak holder (col. 3, lines 11-21); and

a peak value keeper (12) for keeping a peak value of the output signal of the exponential amplifier and for generating the AGC adjustment control signal to control a gain of the variable gain amplifier from the kept peak value (fig.3 and col. 3, lines 32-39).

5. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being anticipated over Masashi et al. (5574714) in view of Orban (US 4208548) and further in view of Ota et al (US 5430766).

(1) with regards to claim 4;

Masashi et al discloses in (figures 3 and 4) an automatic gain control (AGC) apparatus having a short settling time in a burst mode optical receiver, comprising:

a variable gain amplifier(10) for variably amplifying an input signal according to an AGC adjustment control signal (col. 2, lines 62-63);

an exponential amplifier (11 and16) for exponentially amplifying an output signal of the clipper (col.3,lines 22-31), and

a peak holder (13) for detecting a peak value from an output signal of the exponential amplifier(16) and for generating the AGC adjustment control signal for controlling a gain of the variable gain amplifier (col.3,lines 22-31).

Wherein the peak holder comprises:

a peak value detector (12) for converting a DC (Direct Current) level of an output signal of the exponential amplifier so that the DC level of the output signal of the exponential amplifier (16) is matched to a DC level of the peak holder (col. 3, lines 11-21); and

a peak value keeper (12) for keeping a peak value of the output signal of the exponential amplifier and for generating the AGC adjustment control signal to control a gain of the variable gain amplifier from the kept peak value (fig.3 and col. 3, lines 32-39).

Masashi et al. discloses all of the subject matter disclosed above, but for specifically teaching

(a) a clipper coupled to an output terminal of the variable gain amplifier for comparing an output signal of the variable gain amplifier with a preset signal V_{cut} and for outputting a signal difference only when the output signal of the variable gain amplifier is higher than or equal to the preset signal V_{cut} in amplitude, and wherein said clipper clips the output of the variable gain amplifier only when the output signal is lower than said present signal V_{cut}.

(b) wherein the peak value keeper initializes the kept peak value according to an initialization signal.

(i) with regards to item (a) above;

However, Orban in (fig.1, (4) and fig.8, (81)), teaches a clipper coupled to an output terminal of the variable gain amplifier (3) for comparing an output signal of the variable gain amplifier (col. 4, lines 2-8 and lines 23-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the clipper of Orban in the apparatus of Masashi et al for outputting a signal difference only when the output signal of the variable gain amplifier is higher than or equal to the preset signal V_{cut} in amplitude, and wherein said clipper clips the output of the variable gain amplifier only when the output signal is lower than said present signal V_{cut}. The motivation to utilize Orban's device in the apparatus of Masashi et al was to improve on attack time to prevent clipping distortion (col.1, lines 45-55).

Masashi et al. as modified by Orban discloses all of the subject matter disclosed above, but for teaching wherein the peak value keeper initializes the kept peak value according to an initialization signal.

However, Ota et al. in the same field of endeavor (burst mode digital data receiver), teaches reset circuit in (figure 6, 620) for allowing rapid and precise zeroing of the peak detector capacitor (col. 4, lines 52-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize device of Ota in the apparatus of Masashi et al as modified by Orban in order to initializes the kept peak value according to an initialization signal. The motivation to utilize Ota's device in the apparatus of Masashi et al as modified by Orban would be to reduce cost.

(2) with regards to claim 5;

Masashi et al. as modified by Orban discloses all of the subject matter as described above except for specifically teaching wherein, upon receiving a signal that there is no more data input to the AGC apparatus, the initialization signal is delivered to initialize the peak value keeper in order to detect a new peak value when the next data is received.

However, Ota et al. in the same field of endeavor (burst mode digital data receiver), teaches reset circuit in (figure 6, 620) for allow rapid and precise zeroing of the peak detector capacitor (col. 4, lines 52-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize device of Ota in the apparatus of Masashi et al as modified by Orban in order to teach wherein, upon receiving a signal that there is no more data input to the AGC apparatus, the initialization signal is delivered to initialize the peak value keeper in order to detect a new peak value when the next data is

received. The motivation to utilize Ota 's device in the apparatus of Masashi et al as modified by Orban would be to reduce cost.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being anticipated over Masashi et al. (5574714) in view of Orban (US 4208548) and further in view of Kennedy et al (US 4213129).

(1) with regards to claim 6;

Masashi et al discloses in (figures 3 and 4) an automatic gain control (AGC) apparatus having a short settling time in a burst mode optical receiver, comprising:

a variable gain amplifier(10) for variably amplifying an input signal according to an AGC adjustment control signal (col. 2, lines 62-63);

an exponential amplifier (11 and16) for exponentially amplifying an output signal of the clipper (col.3,lines 22-31), and

a peak holder (13) for detecting a peak value from an output signal of the exponential amplifier(16) and for generating the AGC adjustment control signal for controlling a gain of the variable gain amplifier (col.3,lines 22-31).

Masashi et al. discloses all of the subject matter disclosed above, but for specifically teaching

(a) a clipper coupled to an output terminal of the variable gain amplifier for comparing an output signal of the variable gain amplifier with a preset signal V_{out} and for outputting a signal difference when the output signal of the variable gain amplifier is higher than or equal to the preset signal V_{out} in amplitude , and wherein said clipper

clips the output of the variable gain amplifier when the output signal is lower than said present signal V_{cut}.

(b) wherein the clipper and the exponential amplifier comprise: a first transistor having a base receiving an output signal of the variable gain amplifier, a collector connected in common to a supply voltage Vcc on one end of a first resistor, and an emitter connected in common to an emitter era second transistor and one end of a second resistor; a second transistor having a base receiving a specific voltage value corresponding to a preset clipping value, a collector connected to another end of the first resistor, and an emitter connected in common to the emitter of the first transistor and one end of the second resistor; the first resistor having one end connected in common to the collector of the first transistor and the supply voltage Vcc, and another end connected to the collector of the second transistor; and the second resistor having one end connected in common to the emitter of the first transistor and the emitter of the second transistor, and another end grounded.

(i) with regards to item (a) above;

However, Orban in (fig.1, (4) and fig.8, (81)), teaches a clipper coupled to an output terminal of the variable gain amplifier (3) for comparing an output signal of the variable gain amplifier (col. 4, lines 2-8 and lines 23-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the clipper of Orban in the apparatus of Masashi et al for outputting a signal difference only when the output signal of the variable gain amplifier is higher than or equal to the preset signal V_{cut} in amplitude, and wherein said clipper clips

the output of the variable gain amplifier only when the output signal is lower than said present signal V_{cut}. The motivation to utilize Orban's device in the apparatus of Masashi et al was to improve on attack time to prevent clipping distortion (col.1, lines 45-55).

(ii) with regards to item (b) above;

However, Kennedy discloses in (figures 6) a buffer and clipper circuit (40) with transistors Q1, Q2 R1, R4, Vcc, Vee and input signal (fig. 6, 40). The functions of this clipper are not explicitly disclosed in the detail description.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated the device of Kennedy in the apparatus of Masashi et al as modified by Orban in order to receive the output signal of the variable Amplifier. The motivation to utilize Kennedy's device in the apparatus of Masashi et al as modified by Orban would be to increase speed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Conley (US 4346412) discloses a read signal processing circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE TAYONG whose telephone number is (571)270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Liu Shuwang can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Helene Tayong/
Examiner, Art Unit 2611

March 16, 2008
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611